

## DECLARATION

My name is Thomas R. Marrou. I am over twenty-one years of age, of sound mind, and otherwise competent to make this Declaration.

A copy of my curriculum vitae is included as Attachment 1.

I am an environmental consultant with over 39 years of experience in engineering and environmental consultation. I am employed by a Golder Associates, Inc., a global environmental consulting firm and serve as the Texas Operations Manager. A brief summary of my qualifications to give this declaration follows.

I am a Registered Professional Engineer in the State of Texas. I have a Bachelor's and Masters of Environmental Engineering issued by Rice University in Houston, Texas. My experience includes design of wastewater treatment facilities, troubleshooting operations at wastewater treatment facilities, permitting of wastewater treatment facilities under the National Pollutant Discharge Elimination System (NPDES), permitting of industrial facilities under municipal pre-treatment plant programs, investigation of impacts to soil and groundwater, and evaluation of sites for inclusion on the National Priorities List (NPL). I have also asked my colleague, Dr. Frank Castaldi P.E., to review engineering drawings regarding design and modification during the operating life of the Old Vince Bayou Wastewater Treatment Plant located at 200 North Richey in Pasadena, Texas and prepare a report to me on his findings. Dr. Castaldi is qualified to prepare such a report as shown in his resume included as Attachment 2. Such reports are routinely relied on in my field.

Throughout my environmental consulting career, I have routinely investigated regulatory records such as those held by the Environmental Protection Agency (EPA), the Texas Commission on Environmental Quality (TCEQ), and Harris County Public Health and Environmental Services (HCPHES). I have reviewed documentation provided to me by Pastor, Behling & Wheeler, LLC (PBW) which was obtained in a routine review of publicly available records held by TCEQ in Austin, Texas and I requested and received an opportunity to review public documents at the TCEQ regional office in Houston, Texas and the HCPHES offices in Pasadena, Texas (see document request, Attachment 3).

The Old Vince Bayou Wastewater Treatment Plant ("Old Vince") was originally designed and built by the City of Pasadena at the 200 North Richey location in approximately 1944 with operations starting in that year per the City of Pasadena's 104(e) response. Old Vince treated a combined wastewater stream that was discharged by users into a sewer system that was also owned and operated by the City of Pasadena. Old Vince operated under City of Pasadena ownership continuously from 1944 until 2004 when it was replaced by a new plant, the New Vince Bayou Wastewater Treatment Plant ("New Vince"). During the operating life of Old Vince, several upgrades were designed and installed including the addition of new larger clarification equipment and sand filtration in 1976, sludge dewatering equipment using belt presses in 1983, and pure oxygen aeration in 1986, based on the engineering drawings in the TCEQ files.

Old Vince has a history of non-compliance with NPDES permits as documented in correspondence, agency inspections, permit renewal applications, and other documents obtained and reviewed by the file searches conducted. In particular, Old Vince had a history of receiving a higher volume of wastewater than the facility design anticipated, had a need to rehabilitate the sewer system serving the plant to reduce these hydraulic overloads in



accordance with Agreed Orders issued by EPA (1992, 1994, and 1996) and TNRCC (TCEQ) (2003), had documented releases and bypasses that discharged to site soils and Vince Bayou, and managed sludge generated by the process in on-site drying beds. Each of these is discussed further below.

The TCEQ and HCPHES files contain documents that refer to hydraulic overloads experienced by Old Vince that coincide with recorded rainfall events. ([Attachment 4](#)). Eventually, an Agreed Order was signed by the City of Pasadena and U. S. EPA Region 6 that required the City of Pasadena to evaluate and upgrade the sewer system to minimize the infiltration and inflow of storm water into the sewer system and subsequently to Old Vince. An influent flow of 21 million gallons of wastewater per day into Old Vince is referenced but Old Vince's stated design capacity by permit was approximately 7 million gallons of wastewater per day. This discrepancy between permitted and documented actual flow resulted in failure to comply with permitted discharge parameters, overflows of wastewater onto the ground, and bypasses of untreated wastewater to Vince Bayou. The City of Pasadena was required by Agreed Order to perform collection system upgrades on the lift stations and sewer lines that fed Old Vince and regularly report progress to the EPA ([Attachment 5](#)).

Old Vince also experienced documented spills of untreated or partially treated wastewater to the ground during upset conditions and maintenance events (See [Attachment 6](#)). These documented spills include events where commercial/industrial, as opposed to municipal, discharges may have discharged greases or other materials into the sewer collection system that caused foaming in Old Vince equipment, in turn causing materials to overflow the sides of vessels onto the soil. Spill response documentation provided by the City of Pasadena state that excess liquids were vacuumed up and disinfectant applied to affected soils, but no soil remediation is documented. Inspection reports document that grit and debris were known to be present on site soils on at least one occasion (see [Attachment 7](#)).

Sludges that were generated by Old Vince were managed in drying beds on site. These drying beds are generally sand structures placed directly on soils on which sludge is directly placed, allowing free liquid in the sludge to either evaporate or infiltrate into the soils under said structures. (See [Attachment 8](#)). This practice continued from 1944 until a sludge thickener and belt presses were installed in 1983.

Municipal wastewater is documented by EPA to contain Hazardous Substances, i.e. materials designated by EPA in the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") as severely harmful to human health and the environment. A report issued in 2009 ([Attachment 9](#)) documents research activities conducted by EPA to determine typical materials, including Hazardous Substances, present in municipal wastewater treatment sludge. EPA and TCEQ challenged the City of Pasadena's assertion that it did not accept commercial/industrial wastewater at Old Vince, ordering the City of Pasadena to institute a pre-treatment program that included Old Vince and recommending that research be completed to determine which of the industrial and commercial facilities known to be in the City of Pasadena service area were discharging into the municipal system ([Attachment 10](#)). In response, the City of Pasadena confirmed that it did indeed accept these wastewaters by listing four known commercial dischargers (Columbia Bayshore Hospital with multiple locations (seven), Minh Foods with two locations, San Jacinto College, and Blalock Nursing Home) that were discharging into the municipal system and asserting that investigations were underway to determine if their discharges were the source of repeated upset conditions that were being experienced at Old Vince ([Attachment 11](#)). The City of Pasadena, in its 104(e) response, states "industrial wastes in the City's jurisdiction were, and still are, conveyed to and treated by the

nearby Gulf Coast Waste Disposal Authority's industrial wastewater plant." However, the Gulf Coast Waste Disposal Authority (GCA) commenced operations in 1969, approximately 25 years after Old Vince initiated treatment of wastewater. GCA was formed to manage wastewater from three major industrial facilities (a pulp and paper plant, an air separation facility, and a petroleum refinery) that already had their own wastewater treatment facilities on site. The City of Pasadena contracted with GCA to treat a portion of the Old Vince wastewater at this industrial wastewater facility.

The municipal wastewater treated by the City of Pasadena contained Hazardous Substances as defined by EPA CERCLA. The documents found during the file search at the TCEQ headquarters and TCEQ Region 12 offices include NPDES/TDPES permit renewal applications from 1991, 1998 and 2002 (Attachment 12). As part of the renewal process, the City of Pasadena collected effluent samples and authorized analytical testing for a range of constituents as required by applicable NPDES regulations and effluent reports submitted by the City of Pasadena. The results of these analyses indicate that the following Hazardous Substances were present in Old Vince effluent above laboratory quantification levels:

1990 - Copper, nickel, zinc, phenols

1997 - Aluminum, barium (some barium compounds are Hazardous Substances), zinc

2001 – Aluminum, barium, chloroform, 1,4-dichlorobenzene, phenols, and zinc

The found documents also included the results of waste characterization testing of sludges that were generated at Old Vince by the belt presses after their installation and shipped off-site for disposal (Attachment 13). These analytical testing results indicate that Hazardous Substances were consistently present in sludge at Old Vince. Specifically, the following Hazardous Substances were detected in testing during the following years:

1996 – Benzene, barium, chromium, copper, cyanide, lead, nickel, phenols, silver, zinc,

1998 – Lindane (gamma-BHC) #2, methyl ethyl ketone

2000 – Barium, selenium

These sludge records are available only after the installation of the belt presses at Old Vince to replace the original drying beds. Absence of analytical and disposal records for sludge prior to this date indicate a historic practice of on-site disposal of comparable materials.

The available effluent and sludge analytical test results positively demonstrate that Hazardous Substances were present in both treated effluent and dewatered sludge at Old Vince. As Old Vince had no secondary operations to its primary operation of wastewater treatment, and the Hazardous Substances listed above are not used in wastewater treatment operations, the only source for these Hazardous Substances would be the untreated wastewater collected from various dischargers to the sewer system that discharged to Old Vince.

In my review of publicly available documents obtained from regulatory agency files, I specifically looked for closure plans, documentation that remediation was performed at the site during or after its operating life, and closure certification documents that might indicate how or if structures, containers, and equipment at the site might have been emptied, cleaned, and

certified to be free of Hazardous Substances after it was no longer in use to treat City of Pasadena wastewater. I have been unable to find any such documentation, and I have been unable to find any documentation that indicates that the structures, containers, and equipment were managed in any way after wastewater no longer entered Old Vince. A review of a Harris County Pollution Control Investigation Report (Attachment 14) and a TCEQ Inspection Report (Attachment 15) indicates that no cleanup or maintenance was known to have been completed after Old Vince was idled in March of 2004 as documented by TCEQ cancellation of TPDES Permit TX0063410 on March 8, 2004.

Historical aerial photographs were obtained from commercial sources to analyze what equipment was present on site prior to 2004 and during the period from discontinuation of operations in March 2004 until the subsequent sale of Old Vince to USOR in February 2009. (Attachment 16). These photographs clearly indicate that material was constantly present in certain structures, containers, and pieces of equipment at Old Vince in 2003, in 2004, and subsequent years up to and including the present time. Structures, containers and equipment that are intended to gravity drain, such as the trickling filter, the sand beds, and the chlorine contact chamber, do appear to drain, but also there is no indication that residual material (e.g., non-drainable solids) from operations was cleaned out of these units.

The Inspection Reports provided by HCPHES and TCEQ (Attachments 14 and 15) also include copies of the Deed Without Warranty between the City of Pasadena and USOR #2 for the sale of Old Vince in 2009 from the City of Pasadena to USOR #2. This document not only clearly states, but emphasizes to the purchaser that Hazardous Substances may be present at Old Vince, as follows:

5. **Grantee acknowledges that the Property described herein may have been used in connection with municipal sewage treatment operations, including the storage, transfer and disposal of raw municipal sewage and that such sewage products, or derivatives may have been spilled, leaked, or otherwise discharged onto or into the Property. Equipment and sites may contain asbestos, hazardous substances, or Naturally Occurring Radioactive Material ("NORM"); and NORM-containing material and other wastes or hazardous substances may be buried, have come into contact with the soil, or otherwise have been disposed of on the Property. Grantee**

**understands that special procedures may be required for the remediation, removal, transportation, or disposal of wastes, asbestos, hazardous substances, and NORM from the equipment and Property. Grantee assumes all liability when such activities are performed by or on behalf of Grantee.**

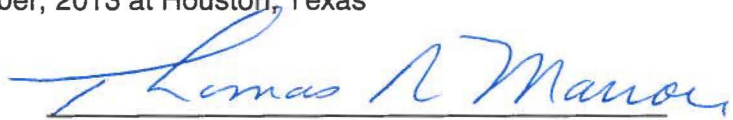
Further, the City of Pasadena acknowledged a continuing willingness to accept industrial wastewater into its municipal wastewater treatment facilities when it expressly agreed to take the pre-treated wastewater discharge from USOR (an industrial user) into the City of Pasadena's new municipal wastewater system, New Vince, for treatment and ultimate discharge in February 2009.

I inspected the former City of Pasadena Old Vince Plant on September 4, 2013. I inspected all equipment that was not totally enclosed. All equipment inspected appeared to

contain wastewater and/or wastewater residual material with the exception of the trickling filter and the sand beds. The trickling filter and sand beds contain media (rock and sand, respectively) that has been subject to incident rainfall, apparently without additional waste addition, since the Plant was idled in 2004. Material that may remain at the bottom of these two pieces could not be observed due to the media. Materials present in equipment inspected were indicative of municipal wastewater in that a layer of organic material, that resembled green algae, was present on the surface of liquids within several major pieces of equipment on site. This is typical of waters that contain nutrients and organic matter such as that found in typical municipal wastewater. There was no visible evidence that any of the liquid holding equipment had been emptied or cleaned prior to the plant being idled.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed this 24<sup>th</sup> day of September, 2013 at Houston, Texas

  
Thomas R. Marrou, P.E.